Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended):   A robot comprising:

a motion unit;

an array of detectors supported by the motion unit;

a memory device storing data corresponding to at least one counter configured to determine a time value;

an infrared sensor operatively coupled to the memory device, the infrared sensor including: (a) an infrared light source configured to produce a plurality of pulses of infrared light directed toward an environment of the robot; (b) at least one optics configured to focus a plurality of reflections of from the infrared light pulses from different portions of the environment of the robot to different detectors in a 2D the array of detectors, the detectors producing indications of distances to the closest object in an associated portion of the environment; and

at least one processor operatively coupled to the memory device, the processor operable to receive determine distance information based at least in part on the determined time valuethe indications from the infrared sensor, determine a feature in the environment and control the motion unit to avoid the feature.

Claim 2 (currently amended):   The robot of claim 1, wherein the indication determined distance information is produced by measuring a period of time to receive a reflected pulse and the at least one processor is operable to determine a feature of the environment based at least in part on the determined distance information.

Claim 3 (currently amended):   The robot of claim 1, wherein the determined distance information indication is produced by measuring an energy of a reflected pulse up to a cutoff time.

Claim 4 (currently amended):   The robot of claim ~~1~~2, wherein the feature is indicated in an internal map.

Claim 5 (currently amended):   The robot of claim ~~1~~2, wherein the feature is a step.

Claim 6 (currently amended):   The robot of claim ~~1~~2, wherein the feature is an object in a room.

Claim 7 (original):   The robot of claim 1, wherein the robot is a robot cleaner.

Claim 8 (currently amended):   A method comprising:

storing data in a memory device of a robot, the memory device corresponding to at least one counter configured to determine a time value;

producing a plurality of pulses of infrared light directed toward an environment of the robot;

focusing with at least one optic a plurality of reflections ~~from~~ of the infrared light pulses from ~~different portions of~~ the environment of ~~a~~the robot to ~~different detectors in~~ a~~n 2D~~ array of detectors; and

processing the determined time value to determine distance information based at least in part on the determined time value~~producing indications of the distances to the closest object in an associated portion of the environment using the detectors; and using the indications from the infrared sensor to determine a feature in the environment so that the robot can be controlled to avoid the feature~~.

Claim 9 (currently amended): The method of claim 8, wherein the ~~indication~~ <u>determined distance information</u> is produced by measuring the time to receive a reflected pulse <u>and; including determining a feature of the environment based at least in part on the determined distance information</u>.

Claim 10 (currently amended): The method of claim 8, wherein the <u>determined distance information</u> ~~indication~~ is produced by measuring the energy of a reflected pulse up to a cutoff time.

Claim 11 (currently amended): The method of claim 8<u>9</u>, wherein the feature is indicated in an internal map.

Claim 12 (currently amended): The method of claim 8<u>9</u>, wherein the feature is a step.

Claim 13 (currently amended): The method of claim 8<u>9</u>, wherein the feature is an object in a room.

Claim 14 (original): The method of claim 8, wherein the robot is a robot cleaner.

Claim 15 (currently amended):   A robot comprising:

a motion unit;

an array of detectors supported by the motion unit;

a memory device storing data corresponding to at least one counter configured to determine a time value

an infrared light source operatively coupled to the memory device and configured to produce a plurality of pulses of infrared light directed toward an environment of the robot;

at least one optic operatively coupled to the memory device and configured to focus a plurality of reflections of the infrared light pulses from the environment of the robot to the array of detectors; and

a sensor producing multiple indications of distances to the closest object in an associated portion of the environment; and

at least one a processor operatively coupled to the memory device, the processor operable to receive determine distance information based at least in part on the determined time value the indications from the sensor, determine a feature in the environment and control the motion unit to avoid the feature.

Claim 16 (currently amended):   The robot of claim 15, wherein the indications the determined distance information is are produced by measuring a period of time to receive a reflected pulse and the at least one processor is operable to determine a feature of the environment based at least in part on the determined distance information.

Claim 17 (currently amended):   The robot of claim 15, wherein the determined distance information indications are is produced by measuring an energy of a reflected pulse up to a cutoff time.

Claim 18 (currently amended):   The robot of claim 1516, wherein the feature is indicated in an internal map.

Claim 19 (currently amended):　The robot of claim ~~15~~16, wherein the feature is a step.

Claim 20 (currently amended):　The robot of claim ~~15~~16, wherein the feature is an object in a room.

Claim 21 (original):　The robot of claim 15, wherein the robot is a robot cleaner.

Claims 22-23 (canceled)

Claim 24 (currently amended):　A method comprising:

storing data in a memory device of a robot, the memory device corresponding to at least one counter configured to determine a time value;

producing a plurality of pulses of infrared light directed toward an environment of the robot;

focusing with at least one optic a plurality of reflections of the infrared light pulses from the environment of the robot to an array of detectors; and

processing the determined time value to determine distance information based at least in part on the determined time value;~~using the light to produce indications of the distances to the closest objects in an portions of the environment; and using the indications from the infrared sensor to determine a feature in the environment so that the robot can be controlled to avoid the feature~~.

Claim 25 (currently amended):　The method of claim 24,~~wherein the light is infrared light~~ including determining a feature of the environment based at least in part on the determined distance information.

Claim 26 (currently amended):　The method of claim 24, wherein the determined distance information is ~~indications are~~ produced by measuring the time to receive a reflected pulse.

Claim 27 (currently amended): The method of claim 24, wherein the determined distance information is indications are produced by measuring the energy of a reflected pulse up to a cutoff time.

Claim 28 (currently amended): The method of claim 2425, wherein the feature is indicated in an internal map.

Claim 29 (currently amended): The method of claim 2425, wherein the feature is a step.

Claim 30 (currently amended): The method of claim 2425, wherein the feature is an object in a room.

Claim 31 (original): The method of claim 24, wherein the robot is a robot cleaner.

Claims 32-33 (canceled)